

NASA ER-2 High Altitude Aircraft

ER-2 tail number 809, is one of two Airborne Science ER-2s used as science platforms by Dryden. The aircraft are platforms for a variety of high-altitude science missions flown over various parts of the world. They are also used for earth science and atmospheric sensor research and development, satellite calibration, and data validation.

The aircraft is 63 feet long, with a wingspan of 104 feet. The top of the vertical tail is 16 feet above ground when the aircraft is on the bicycle-type landing gear. Cruising speeds are 410 knots, or 467 miles per hour, at altitude. A single General Electric F118 turbofan engine rated at 17,000 pounds thrust powers the ER-2.

On November 19, 1998, the ER-2 set a world record for medium weight aircraft reaching an altitude of 68,700 feet.

National Aeronautics and Space Administration

Aircraft I Sheet



NASA's ER-2 high altitude aircraft in flight over California desert.

Aircraft Specifications

Primary Mission/Capabilities:

- Airborne science platform (in situ and remote sensing)
- Atmospheric sampling
- Sensor research
- Satellite calibration and data validation

Performance:

Speed – 410 kts at altitude

Altitude – 65,000 ft

Load factor – 2,600 lb of experiments in nose bay, main equipment bay, and two wing-mounted superpods

Range/duration – 2,200 nm/6 hr

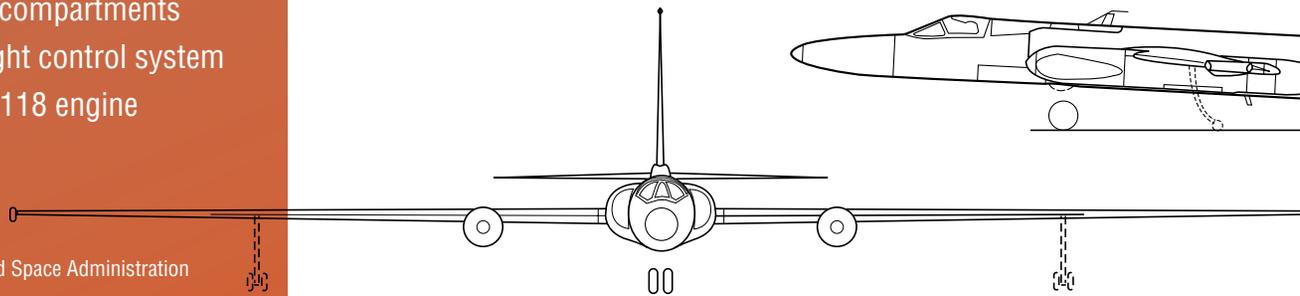
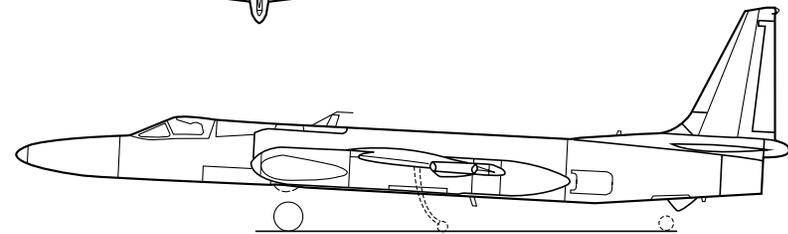
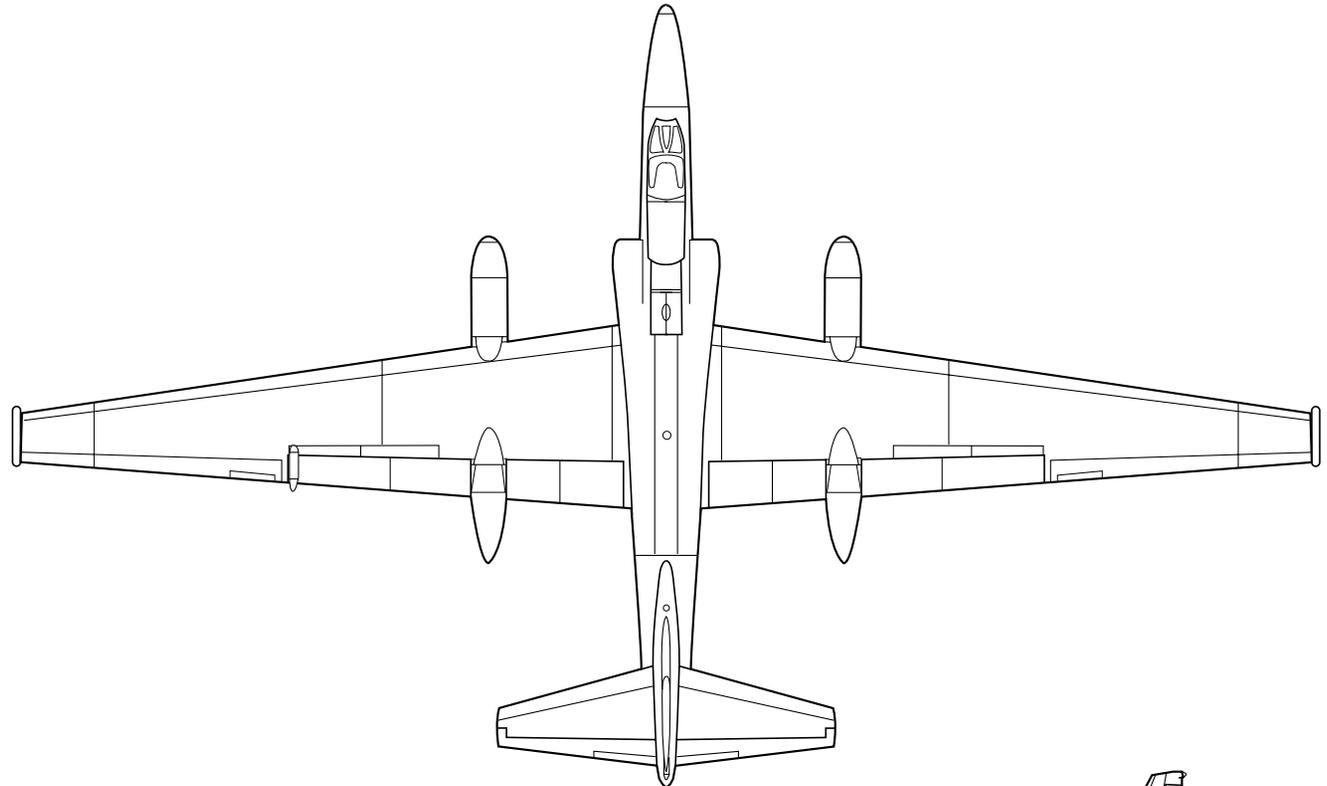
Test Instrumentation:

- Aircraft instrumentation recording/transmission
- Video transmission

Aircraft Systems:

- Four pressurized modular experiment compartments
- Standard flight control system
- Single GE F-118 engine

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Dryden Flight Research Center

P.O. Box 273

Edwards, CA 93523-273